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Runoff degrades local streams

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Stormwater runoff carries pollutants into the waterways. These pollutants impact the ecology of streams, resulting in degraded habitat and poor water quality. The N.C. Department of Environment and Natural Resources sets different standards for stream health based on the use of the stream.

All streams should provide adequate habitat for aquatic organisms. Waterways in this region are also classified based on recreation use; whether they are drinking water sources; and whether they are sensitive trout waters.

The two most important components of stream health are the quality of the water itself and the quality of the habitat the stream provides for organisms. Habitat must provide the following to support survival: food, water, oxygen, conditions for successful reproduction, protection from predators and non-crowding space.

Stream assessment also includes measuring the quality of the habitat the stream provides. Water quality is measured by temperature; pH, how acidic or non-acidic (alkaline) the water is; oxygen; nitrates and phosphates; heavy metals; turbidity; total suspended solids and more. Habitat measures include the quality of the streambed, stability of the banks and vegetative cover alongside the stream.

The most prevalent pollutant in Western North Carolina is sediment. Sediment comes from unpaved roads and road banks, but, more importantly, from disturbed land. Anywhere vegetation has been cleared, such as a construction site or an area prepped for landscaping, that area becomes vulnerable to erosion. Dirt washing off disturbed sites into streams buries the rocky bottom of the streambed. This smothers fish eggs, larvae and bugs, and eliminates hiding places. A sandy, silty stream bottom is poor habitat.

When stream banks are cleared of vegetation, the banks themselves erode, depositing soil into the stream and becoming steep and sheer. This is also poor habitat. Eroding stream banks are a real loss of valuable property.

All pollutants carried by stormwater runoff are non-point-source pollutants because they don't come from any single point of origin. Everyone can help reduce non-point-source pollution.

- Never dump anything down a storm drain.
- Never dump liquid or solid waste onto the pavement.
- Make sure a car doesn't drip pollutants onto the pavement and do regular auto maintenance.
- Use fertilizers and other garden products sparingly and never when rain is predicted.

- Scoop up after the pet.
- Fence livestock out of streams.
- Make sure all household drainage from washing machines, toilets, sinks and bathtubs are connected to a sewer system or a septic tank.
- Inspect and maintain septic systems regularly.